ISO 14001 Certification of Ev-K²-CNR Pyramid

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Other researchers involved

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Project objectives

The aim of this proposal is to design, introduce and certify an Environmental Management System in the EV-K²-CNR Laboratory, according to the ISO 14001 standard. A secondary goal is the diffusion of environmental awareness, which will be achieved with the support of local authorities and the local university.

Duration of the research project

2 years commencing 2003

General description of the project

The project will be partly carried out in Italy, partly at the University of Kathmandu and the Pyramid.

Project activity in the first year

1. Assessment of the feasibility of environmental certification. The proponent has already demonstrated that it is possible to certify rudimentary accommodation facilities in accordance with the ISO 14001 standard, through a project carried out at various Alpine refuges, which concluded with the certification of the Federico Chabod and Walter Bonatti refuges in Valle d'Aosta. Furthermore the environmental certification of the Regina Margherita refuge, that also took place following a project carried out by the proponent that lasted several years, demonstrates that it is possible to obtain environmental certification even in remote locations where research activities are carried out. There is good reason therefore to believe that the

positive results of previous projects can be applied to the specific context of the Pyramid. Furthermore, the formalised nature of the Pyramid's procedures and its organisation, tried and tested over many years of activity, provide a positive contribution to the project. In any event, the feasibility of certification needs to be assessed, both in terms of the ISO14001 standard, and with regard to the legislation imposed by the Nepalese authorities on activities that take place in its territory.

2. Preliminary environmental analysis based on the available documentation and interviews with those responsible for its management. The preliminary environmental analysis is a crucial phase of the entire operation and has to be conducted in situ. Therefore, after having carefully prepared for the visit, and after having gained a basic understanding of the situation on the basis of several check-lists, it will be necessary to spend one week at the Pyramid in order to formalise the preliminary environmental analysis. The participation of staff from the University of Kathmandu is considered to be useful at this stage, in order to encourage an exchange of knowledge and to illustrate the importance of the certification. It is also important that prior to the in situ activities, a meeting be held at the University of Kathmandu open to graduate students and other parties that the local Authorities feel could be potentially interested, to illustrate the overall project and to encourage debate on the subject of environmental certification.
   The preliminary environmental analysis represents the basis on which to construct an EMS, once any "weak" areas have been identified, the objectives for improvement can be defined, the action to be taken can be planned and the entire Environmental Management System can be structured. In this sense, the key document that sanctions the real commitment of the Pyramid, and more specifically of its Top Management with regard to the surrounding environment, through the implementation and the active maintenance of the EMS, is represented by the Environmental Policy.
3. Compilation of the manual for environmental management, which represents the document of public domain and which can be considered a sort of general index of the entire environmental management system.
4. Compilation of the entire set of support documentation for the environmental management system, namely the Procedures and the Forms that represent the mechanism that make the system itself work.
   The preparation of the documentation required for the standard will take place in Italy, but the public material will be made available to the local organisations that contribute to the project.

Project activity in the second year

1. Introduction of the EMS at the Pyramid. The EMS, created in the previous stage, will be fine-tuned with the assistance of the Pyramid's managerial staff and will be operational for a certain period, that is essential to calibrate it, i.e. to render it suitable to efficiently and effectively manage the relationship between the work of the Pyramid and its surrounding environment.
2. Internal Audit. The research group will carry out an internal audit to verify that the EMS is operational and is adequate to satisfy the procedures required for certification. At the same time, and before starting the paperwork required for certification, the system needs to be reviewed by Top Management with a view to continuous improvement in order to assess its effectiveness and adequacy.
3. Identification of the certification body. In this phase, the certification company will be chosen.
4. Visit for certification. The terms and the means by which the certification visit will be carried out will be identified.

Materials and methods

The methodology adopted is the ISO14001 standard, chosen due to its worldwide diffusion which is proof of its applicability and validity, and because it represents a sound reference. The tool used could be the "Standard manual for the realisation of an Environmental management system for Mountain refuges" that represented the basis for the creation of all the support documentation required for the certification of the 3 alpine refuges, the projects for which were carried out by the proponent, and which, as mentioned previously, are rudimentary accommodation facilities similar to the Laboratory-Observatory.

Expected results, evaluation and their transferability

The expected result is the UNI EN ISO 14001 certification of the Pyramid. We would like to emphasise that the proposal requires a high degree of integration with the local academic world, both in order for its importance to be fully understood (there are no other activities along these lines that demonstrate the importance of environmental issues) and to encourage an exchange of views on priorities in the environmental field and on ways in which to take action. Furthermore, in Nepal, we need the agreement and the support of the RONAST.

Finally, we would like to point out the importance of this project to obtain certification of the Pyramid, in terms of promoting the spread of voluntary environmental management tools, also in consideration of the growing trend that ISO 14001 certifications are recording in Eastern countries, as illustrated in Tables 1 and 2.

Table 1 – Trend of ISO 14001 certification in Far Eastern countries

Far East	Dec. 1995	Dec. 1996	Dec. 1997	Dec. 1998	Dec. 1999	Dec. 2000	Dec. 2001
Brunei Darussalam						2	4
China		9	22	94	222	510	1085
Hong Kong, China		7	46	56	51	105	165
Macau China					1	1	1
Chinese Taipei	2	42	183	203	216	421	999
Indonesia		3	45	55	55	77	199
Japan	4	198	713	1542	3015	5556	8123
Korea, Democratic People's Republic of						26	38
Korea Republic of	19	57	174	263	309	544	880
Malaysia		7	36	86	117	174	367
Myanmar							1
Philippines		1	11	27	39	46	120
Singapore		37	65	78	87	100	298
Thailand		58	61	126	229	310	483
Vietnam				2	9	9	33

Source:http://www.iso.ch/iso/en/prods-services/otherpubs/pdf/survey11thcycle.pdf

Table 2 – Trend of ISO 14001 certification in African and West Asian countries

Africa/West Asia	Dec. 1995	Dec. 1996	Dec. 1997	Dec. 1998	Dec. 1999	Dec. 2000	Dec. 2001
Afghanistan					1	4	4
Bahrain					2	2	2
Bangladesh							2
Botswana							2
Cameron							2
Egypt		1	7	13	35	78	100
India	1	2	28	40	111	257	400
Iran			2	8	12	12	34
Israel		4	6	25	25	60	75
Jordan				2	8	16	10
Kenya						2	3
Kuwait							3
Lebanon				1	4	5	5

Mauritius		1	1	2	3	4	5
Marocco					1	4	6
Namibia					1	4	4
Nigeria						1	5
Oman			1	1	1	2	3
Pakistan		1	2	2	2	4	10
Palestina						1	1
Qatar				1	1	1	1
Saudi Arabia			1	1	3	6	6
South Africa			21	30	82	126	169
Sri LanKa						2	2
Syrian Arab Republic					2	3	5
Tunisia				1	1	3	7
United Arab Emirates		1	4	9	36	48	49
Zambia				2	2	2	2
Zimbabwe					4	4	6

Source:http://www.iso.ch/iso/en/prods-services/otherpubs/pdf/survey11thcycle.pdf

Forecasts and proposals for the diffusion of the results

Results will be disseminated by the University itself, through the communication channels of the Department of Commodity Sciences. For reasons of protection, at this stage we have listed the certain channels represented by:

1. internet sites: http://www.econ.unito.it, http://web.econ.unito.it/cresta, http://web.econ.unito.it
2. articles in the University of Turin's periodical
3. articles in specialist publications:
    a. Mountains: Rivista della Montagna, Alp
    b. Quality: De Qualitate, Qualità, etc…
    c. Ecology

Furthermore, the project could be promoted by organising conferences in Italy and in Nepal.

The participants hereby state that they are willing to write articles and to cooperate with journalists in order to promote the dissemination of the results achieved.

Expected future continuation

The activity carried out is aimed at the environmental certification of the Pyramid, and in this case, the future evolution of such activity regards the "maintenance" of such

system, more specifically periodic contact in order to update documentation and in any other situation in which an exchange of opinions is considered useful.